

IN THE ABSTRACT

Please amend the abstract as requested by the Examiner as follows:

Methods are provided for altering the cleavage specificity of a Type IIIG restriction endonuclease, the Type IIIG restriction endonuclease being characterized by a cleavage domain adjacent to a methylase domain, the methylase domain located adjacent to a specificity domain. The method includes ligating DNA or protein sequences to form a fusion DNA or fusion protein. Where a fusion DNA is formed, the host cell is transformed with the fusion DNA to express a Type IIIG restriction endonuclease with altered cleavage specificity. Methods are provided for creating a chimeric Type IIIG restriction endonuclease and determining its restriction endonuclease activity.